SEQUENCE LISTING

```
<110>  Yu, Tun-Ping
       Hopkins, Nick
       Sasaki, Shoji
       Wang, Lizhen
       Bastiaansen, John
       Wilson, Eldon
       Mileham, Alan
       Deeb, Nader

<120>  GENETIC MARKERS ASSOCIATED WITH SCROTAL HERNIAS IN PIGS

<130>  P05787US01

<140>  US
<141>  2003-10-03

<150>  US 60/416,211
<151>  2002-10-03

<160>  37

<170>  PatentIn version 3.2

<210>  1
<211>  347
<212>  DNA
<213>  Sus scrofa

<400>  1
ggactccacc tctgccttcc tccagccacc cctacccccca ccacaagctg ttgacagtct      60

ggccattcac tccctgctca cattyccact cccggttcta aaaggggaaa acttgtcaag     120

gacagtcttg acaaatgggt cacaggccac ccttctatca ctagtaagga gataggcagt     180

caggttggaa cagaagaggt tttgagaagc ctgctggctt gcccaggctc acagcaggca     240

ccggcctcca aggtcacatc ccagaaggag ataggggctg gcctcccaca cccacattcc     300

tgctccccca tataagccag ggcagcccag cccctcaaag tgccagg                  347


<210>  2
<211>  459
<212>  DNA
<213>  Sus scrofa

<400>  2
atgcagggtc cttctctctc tcagctggtc ctggtgctgg cagcaatggg ggccctgctg      60

gaggctggga cccccagaga agaggtctcc agcaccccag ctttgcccag ggagccagcc     120

acaggcaccg aggggctcat cttccactgg gactggaact ggccgccccc tggtgcctgg     180

cccctgggtg gccctcagga ccccctgtgc ctagtgaccc tgaatggaga ccctggcaat     240

gggagcagtc cttttctgtg ggtggtgggg actctaagca gttatgagca ggccttcctg     300
```

gaggctgtgc ggcatgcccg ctggggtccc caagacctgg ccaactttgg gctctgccct 360

cccagcctca ggcaggctgc cctgcccctt ttgcagcagc tgcaggcatg gctgggggag 420

cccagggggc agcgactggt ggtcctgcac ctggaggaa 459

<210> 3
<211> 610
<212> DNA
<213> Sus scrofa

<400> 3
tgccctgccc cttttgcagc agctgcaggc atggctgggg gagcccaggg ggcagcgact 60

ggtggtcctg cacctggagg aaggtacgtg ggggctgcag cgggacctgg tgggtgggca 120

gaggactggg ctctagtctc aggatgggag acgactgttt cttgcytaga gccgcaccca 180

gcctcctcag gaagttgagg ctgatggcca gacaggtggg tgaccttatt ttgccctgtc 240

tgggagtgcc tcctccagta cctgggaagg tccagcaaca gacaaataca caygrccatg 300

gacctcaggg acccactgca gggaakggct tccctccagg agagcttcag accaagagac 360

cccaagggct tgggtaaccc acagcagtgg gggcagtgct ccaccaccca ccctatgcat 420

ccctcctccc aggttgcctg tcccaggcag gtttggcacc tggagcccaa gggtatcaag 480

tgtctctcag acacagagcc gtccccccac tgaggctccc cctcctgcac aggcgacagg 540

ctttggggga gggtcttggg cttctgtggt tcaggcaact ctgtccactt ccccctttgt 600

cctggccaca 610

<210> 4
<211> 144
<212> DNA
<213> Sus scrofa

<400> 4
gtgtcgtggg agccaacacc cttgctgaag ttccaggagc ccctacctgg agaagccagc 60

cccctggagc tggcgctgtt ggtgttgtat ccagggcccg gcccagaggt cactgtcacc 120

ggggctgggc tgcccggcgc ccag 144

<210> 5
<211> 212
<212> DNA
<213> Sus scrofa

<400> 5
gtaccagaga ggtgaatgag gctgtccctg ggccaccagg agccctcatt caaggcaagg 60

gcgggattat tgaggggggg ggggktaact gcacctaaca gaaaggctgt gactgtccaa 120 gttggaattt tgcagggatg tttagggcag caggcaagca gggctggtgt cccaaggccc 180

cagcaagcct ggctgagtcc ccatctccac ag 212

<210> 6
<211> 108
<212> DNA
<213> Sus scrofa

<400> 6
agcctctgcc cgacyaggga ctctggcttc ctggcgttgg cggtcgacca cccagagagg 60

gcctggcgtg gctctgggct tgctctgacc ctgcgacgcc gcggaaat 108

<210> 7
<211> 105
<212> DNA
<213> Sus scrofa

<400> 7
ggtagccccc tcccccagac tggagccggg ctggggcggc tgccctcgga aacaccccc 60

ccaccaccct tccagycgst gagccagctc ctgcctccat cctca 105

<210> 8
<211> 162
<212> DNA
<213> Sus scrofa

<400> 8
ggtgcctccc tgagcaccgc ccagctgcag gcgctgctgt ttggcgccga ctctcgctgc 60

ttcacacgga tgaccccggc cctgctcctg ttgccgccgc aggggccggt gccgatgccc 120

gcacacggcc gggtggactc aatgccattc ccgcagccca gg 162

<210> 9
<211> 101
<212> DNA
<213> Sus scrofa

<400> 9
ctgcgcatga gtcagaactt gggggcgcag ggacgtgggg gcagcgcagg cttgtgccct 60

cacgtccccg cgctccgccg tccaggctgt ccccagagcc c 101

<210> 10
<211> 22
<212> DNA
<213> Sus scrofa

<400> 10
ggactccacc tctgccttcc tc 22

```
<210>  11
<211>  22
<212>  DNA
<213>  Sus scrofa

<400>  11
ggaacttcag caagggtgtt gg                                              22


<210>  12
<211>  21
<212>  DNA
<213>  Sus scrofa

<400>  12
ccagcaacag acaaatacac g                                               21


<210>  13
<211>  20
<212>  DNA
<213>  Sus scrofa

<400>  13
gctccaggtg ccaaacctgc                                                 20


<210>  14
<211>  22
<212>  DNA
<213>  Sus scrofa

<400>  14
ggatgtttag ggcagcaggc aa                                              22


<210>  15
<211>  19
<212>  DNA
<213>  Sus scrofa

<400>  15
gcggcgtcgc agggtcaga                                                  19


<210>  16
<211>  18
<212>  DNA
<213>  Sus scrofa

<400>  16
ctgcgacgcc gcggaaat                                                   18


<210>  17
<211>  22
<212>  DNA
```

<213> Sus scrofa

<400> 17
gatggaggca ggagctggct ca 22

<210> 18
<211> 152
<212> DNA
<213> Sus scrofa

<400> 18
gagccaggga gtgatgctga gatcaaagaa tttgctgctg gctacaacgt caaatttgat 60

atgttcagca agatctgtgt gaatggggac gatgcccacc ctctgtggaa gtggatgaaa 120

gtccagccca aggggagggg catgctggga aa 152

<210> 19
<211> 86
<212> DNA
<213> Sus scrofa

<400> 19
gtgagttggg gggctggggt gagagtggag ggcagtgggg atctgcagct gccacgggat 60

tactgatrac acatttcttt ttgcag 86

<210> 20
<211> 25
<212> DNA
<213> Sus scrofa

<400> 20
tgctatcaaa tggaacttta ccaag 25

<210> 21
<211> 160
<212> DNA
<213> Sus scrofa

<400> 21
gtaaggggggt gctgagggcc ygggggggtgc cctcagtcac cctggtgcca cttctagggt 60

ctccacctga cctaaatgga gtgatgggtg ggggccgctt gcttgcttgc cccagtccca 120

ccacggtggc cttctgtccc tgacaccacc tgtcctgcag 160

<210> 22
<211> 60
<212> DNA
<213> Sus scrofa

<400> 22
ttcctcattg ataagaacgg ctgtgtggtg aagcggtacg gtcccatgga agagccccag 60

<210> 23
<211> 22
<212> DNA
<213> Sus scrofa

<400> 23
cagctgccac gggattactg tt 22

<210> 24
<211> 20
<212> DNA
<213> Sus scrofa

<400> 24
cccccaccca tcactccatt 20

<210> 25
<211> 873
<212> DNA
<213> Sus scrofa

<400> 25
atgcagggtc cttctctctc tcagctggtc ctggtgctgg cagcaatggg ggccctgctg 60

gaggctggga cccccagaga agaggtctcc agcaccccag ctttgcccag ggagccagcc 120

acaggcaccg aggggctcat cttccactgg gactggaact ggccgccccc tggtgcctgg 180

cccctgggtg gccctcagga ccccctgtgc ctagtgaccc tgaatggaga ccctggcaat 240

gggagcagtc cttttctgtg ggtggtgggg actctaagca gttatgagca ggccttcctg 300

gaggctgtgc ggcatgcccg ctggggtccc caagacctgg ccaactttgg gctctgccct 360

cccagcctca ggcaggctgc cctgcccctt ttgcagcagc tgcaggcatg gctgggggag 420

cccagggggc agcgactggt ggtcctgcac ctggaggaag tgtcgtggga gccaacaccc 480

ttgctgaagt tccaggagcc cctacctgga gaagccagcc ccctggagct ggcgctgttg 540

gtgttgtatc cagggcccgg cccagaggtc actgtcaccg gggctgggct gcccggcgcc 600

cagagcctct gcccgaccag ggactctggc ttcctggcgt tggcggtcga ccacccagag 660

agggcctggc gtggctctgg gcttgctctg accctgcgac gccgcggaaa tggtgcctcc 720

ctgagcaccg cccagctgca ggcgctgctg tttggcgccg actctcgctg cttcacacgg 780

atgaccccgg ccctgctcct gttgccgccg caggggccgg tgccgatgcc cgcacacggc 840

cgggtggact caatgccatt cccgcagccc agg 873

<210> 26
<211> 2241

<212> DNA
<213> Sus scrofa

<220>
<221> misc_feature
<222> (85)..(85)
<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (972)..(972)
<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (1132)..(1132)
<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (1643)..(1643)
<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (1949)..(1949)
<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (1952)..(1952)
<223> n is a, c, g, or t

<400> 26
ggactccacc tctgccttcc tccagccacc cctaccccca ccacaagctg ttgacagtct 60

ggccattcac tccctgctca cattnccact cccggttcta aaaggggaaa acttgtcaag 120

gacagtcttg acaaatgggt cacaggccac ccttctatca ctagtaagga gataggcagt 180

caggttggaa cagaagaggt tttgagaagc ctgctggctt gcccaggctc acagcaggca 240

ccggcctcca aggtcacatc ccagaaggag ataggggctg gcctcccaca cccacattcc 300

tgctccccca tataagccag ggcagcccag cccctcaaag tgccaggatg cagggtcctt 360

ctctctctca gctggtcctg gtgctggcag caatgggggc cctgctggag gctgggaccc 420

ccagagaaga ggtctccagc accccagctt tgcccaggga gccagccaca ggcaccgagg 480

ggctcatctt ccactgggac tggaactggc cgccccctgg tgcctggccc ctgggtggcc 540

ctcaggaccc cctgtgccta gtgaccctga atggagaccc tggcaatggg agcagtcctt 600

ttctgtgggt ggtggggact ctaagcagtt atgagcaggc cttcctggag gctgtgcggc 660

atgcccgctg ggtccccaa gacctggcca actttgggct ctgccctccc agcctcaggc 720 aggctgccct gcccctttg cagcagctgc aggcatggct gggggagccc agggggcagc 780

gactggtggt cctgcacctg gaggaatgcc ctgcccctttt tgcagcagct gcaggcatgg 840

ctgggggagc ccagggggca gcgactggtg gtcctgcacc tggaggaagg tacgtggggg 900

ctgcagcggg acctggtggg tgggcagagg actgggctct agtctcagga tgggagacga 960

ctgtttcttg cntagagccg cacccagcct cctcaggaag ttgaggctga tggccagaca 1020

ggtgggtgac cttattttgc cctgtctggg agtgcctcct ccagtacctg ggaaggtcca 1080

gcaacagaca aatacacacg accatggacc tcagggaccc actgcaggga anggcttccc 1140

tccaggagag cttcagacca agagacccca agggcttggg taacccacag cagtgggggc 1200

agtgctccac cacccaccct atgcatccct cctcccaggt tgcctgtccc aggcaggttt 1260

ggcacctgga gcccaagggt atcaagtgtc tctcagacac agagccgtcc ccccactgag 1320

gctccccctc ctgcacaggc gacaggcttt gggggagggt cttgggcttc tgtggttcag 1380

gcaactctgt ccacttcccc ctttgtcctg gccacagtgt cgtgggagcc aacacccttg 1440

ctgaagttcc aggagcccct acctggagaa gccagccccc tggagctggc gctgttggtg 1500

ttgtatccag ggcccggccc agaggtcact gtcaccgggg ctgggctgcc cggcgcccag 1560

gtaccagaga ggtgaatgag gctgtccctg ggccaccagg agccctcatt caaggcaagg 1620

gcgggattat tgagggggggg ggntaactgc acctaacaga aaggctgtga ctgtccaagt 1680

tggaattttg cagggatgtt tagggcagca ggcaagcagg gctggtgtcc caaggcccca 1740

gcaagcctgg ctgagtcccc atctccacag agcctctgcc cgaccaggga ctctggcttc 1800

ctggcgttgg cggtcgacca cccagagagg gcctggcgtg gctctgggct tgctctgacc 1860

ctgcgacgcc gcggaaatgg tagccccctc ccccagactg gagccgggct ggggcggctg 1920

ccctcggaaa cacccccccc ccttccagnc gntgagccag ctcctgcctc catcctcagg 1980

tgcctccctg agcaccgccc agctgcaggc gctgctgttt ggcgccgact ctcgctgctt 2040

cacacggatg accccggccc tgctcctgtt gccgccgcag gggccggtgc cgatgcccgc 2100

acacggccgg gtggactcaa tgccattccc gcagcccagg ctgcgcatga gtcagaactt 2160

gggggcgcag ggacgtgggg gcagcgcagg cttgtgccct cacgtccccg cgctccgccg 2220

tccaggctgt ccccagagcc c 2241

<210> 27
<211> 483
<212> DNA
<213> Sus scrofa

<400> 27

gagccaggga gtgatgctga gatcaaagaa tttgctgctg gctacaacgt caaatttgat 60

atgttcagca agatctgtgt gaatggggac gatgcccacc ctctgtggaa gtggatgaaa 120

gtccagccca aggggagggg catgctggga aagtgagttg gggggctggg gtgagagtgg 180

agggcagtgg ggatctgcag ctgccacggg attactgatg acacatttct tttgcagtg 240

ctatcaaatg gaactttacc aaggtaaggg ggtgctgagg gcccgggggg tgccctcagt 300

caccctggtg ccacttctag ggtctccacc tgacctaaat ggagtgatgg gtgggggccg 360

cttgcttgct tgccccagtc ccaccacggt ggccttctgt ccctgacacc acctgtcctg 420

cagttcctca ttgataagaa cggctgtgtg gtgaagcggt acggtcccat ggaagagccc 480

cag 483

<210> 28
<211> 5662
<212> DNA
<213> Sus scrofa

<400> 28
gaattcagga aagaggtctt ctgttcattt aaaatataac gtgatgtgtg ttaacactga 60

ggtagatact gggaattaag gaaacaatag aaagtactgg actgagaatg aatacggaat 120

actgtgtaaa gtggaacgag tgaatgtctc ctaggggaag ctacatctaa atggaatctt 180

gtagaagtgt ttgtaggaat agctcagatg aaaaggagat gaaaaaggta cctcaggctt 240

aaggaatagc ctgattttca gaggtgggaa ggtgcttcaa gccaatgaag tgagattttt 300

tttttttttg gtctttttag ggttgcaccc acagcatatg gaagtttcca agctaaggtc 360

gaattggaac tgcaactgcc aacctacgcc acagtcacag caacatggga tctgagctgc 420

atctgtgaac tacactgcag ctcatggcaa caccagatcc ttaacccact gagcaaatct 480

agagatcaaa cctgtgccct aatggatact agccaggttc actaccactg agccacaacg 540

gtaactactg acgtgagaat ttaacatagg acctccttaa ataatgttca acattttgtt 600

taaatattga gttaattaat attattatac tagaacccag taataaaggg ctagaaataa 660

aaatgggtat tatcagtcac cttctaacca ggaaaacaga aactgctcct gataagagaa 720

gtcagaggat atttaatctg gggaatgcat tacctaagtt ttagaattgt tgagaagcca 780

gacaggaaat aaggaaaccc aaaaatcagt aaccatggga agctcccatc taccctcagg 840

attagagaga cacaaatgag gttcctggag ccaaaaggtg agaccaccca gcagaagctc 900

aagccacatg tggagtttcc tcacaaaagc tgggaacact gagggaggag ctgtctgatg 960

caacctggac caagggagaa agtgcagcta ctgacaagga aagaatgtaa aggagagaca 1020 tactccaacc ttcttcttct tttcactctc taatctcctt ccacagagac aaaaggctgc 1080

tgacacagca gcctaagaaa ggtagcctgc agaggtccct tctcccaaaa atcagagagc 1140

aaaacaggac aagaacaaaa aatgtatcag atagcaaaca ggctatggac aagcacaaca 1200

gaaagaaaat cagagtgatc tatgtttcac ttagttcaac aaaagtgtat cagtgctgga 1260

gttccccttg tggctcagca aaaacaaacc tgactagtat ccatgaggac tcacattcca 1320

tccctggcct cactcagtgg gttaaggatc cagcattgcc atgagctatg gtgtaggctg 1380

cagactcagc tcagatctgg tattgctgtg gctatggtgt aggccggacg gtacagctcc 1440

gattcgaccc cacctgagaa tttccatatg ccacaagtgc ggccctaaaa agacaaaaaa 1500

aaaaaaaaaa aaaaaaaaaa aaaagagtat tagtgcctac tgtggattag aaaccattcc 1560

tattgggaat acaaaggtga ataagaaagc tcactacatc ttcatcaata aaatatttta 1620

ataacttttg tgagagcagt aacatctaac ttggaaatac acttatcaga taaactagac 1680

tataagaggc ttgacattgt gagaaaggtc tggggcctcg tgataggtca aggaaaataa 1740

ggttatttgg ggaaacctca gacctaaatg tggatggaag tataaatatg gacattagga 1800

atagcttccc aaattctgga tggcctctgt tttggcccct ctccaactaa tgcagttggt 1860

gagaattata aaccacagta tggttcaatg agtagctctg ttttggagac cagcagacct 1920

agatatgaac cttagccttg ctctttcagg ttccatagtt ttgggcaagt catttaaatg 1980

ttttcccatc tttcaaagag taataatagt aactccttta aaaagttgtt taaaaattat 2040

atgtgatcat atatttgaag tgtttaagtg tctggggcat agtaggtgct caataaaaac 2100

ctgttaatat tttaaattga atgtgaaaag attgtatata cattactcat taaaacacat 2160

gaattcaata tagtcatata aatatacttt gtgaacacgc atagataaca taaaaagagt 2220

taatttgaaa tataaggtgg gaattcgtac catggcacag gggttaatg atccacttgt 2280

ctctgtggca ttgctggctc aattcccagc ctggctcagt gggtaggatc tggcattgcc 2340

acagctatgg cataggccac agattcaact cggattcgat ccctagcctg gaaacttcca 2400

catgccacag gtgcagccat taaaaaaaaa aaaaaaaaat tctacattcc ttattactta 2460

cacaagtgct aaatcagccc ccagtacttt gataagtttt atctttgtca cacatgtttg 2520

ataaaatcat aaccctggat aaatccaagt atttgttacc catgagtctg aactcctgcc 2580

attaaattag gcaaaaaaaa aaaaaaaaaa aaaatcatgt ttagtggtct tgggttaaat 2640

ttttttacca taaacctcaa atggtccctt aatactggta ggcaatttta ctacctatac 2700

ctaactcacc aatgactcag tccctctacc agtctcatac aaatattaag ccttggatct 2760

ctcaatcctc aacaatgcat ccactacctt tactctcaga tgatgatctt acttcctact 2820

```
ttactgagaa aatgaaaaca atgacaggag agtctgtata aagcccatca cccaccaaac   2880
actcaccatc ttctgcactc accacacctc cccaaccagc agcatctcta cccatgactc   2940
tgcctcctgc ccacaacagg atgagctctc ctgtttaaag ccagtcattc tacttgtgct   3000
ctaagatcca tctcttctca tagtctacct aagaacactg aagaaatttt cctctcttgc   3060
tccaacatca tttttctctc aatcatttgc atcaccaaac taacagttat gtcttcagtc   3120
ttaaaacata aaaatcaaaa ggaaattatc tttaccccac ttccatgtga ccaaatcacc   3180
tgtttttttc ctcatctttg tatcaaaatt ctggggagaa aaagttcaac actttttttg   3240
taatggtcac acctgtggca tataggagct cctttgccac agccacagta atgccggacc   3300
caagttgcat ctgcaactga cacgcagttt atggcaatgc ggatccttag tccactgaga   3360
gaggccaggg attgaattta tatcctcagg aaaacaatgc tgggttctta acttgctgag   3420
ccaaatgtga actcctcaat tctttttat tcatttcttt ccaatcactc agtctgctct   3480
tttattgaat tatagctgat ctataatggt atgttagttt ctggtgtata gcaaagtgat   3540
tcagttatac atacatatta cttttcacat tcttttccat gacagtttat cacaggatat   3600
tgaatatagt tgcgatacag taggaccatt ttgtttatct atcctatata taatagtggt   3660
taatcccaaa gtcccaatcc aaaccatccc caccctcctg cccttggcaa ctacaagtct   3720
gttctccatg tctgtgagtc tgtttctgtt ccattcattt gtgtcataat ttagattcca   3780
catataattg taatcatatg gtatttgtct ttctctttct gacttgcctc acttagtatg   3840
acaatccatg tagccacaaa tgtcttgaca attacttaaa cacacaccaa tcagggtttt   3900
gtttctctca ctccaaagga gcttctctag ccaaggacac tggcaacatt tatgctgcca   3960
cacgcattgc taacctgtca gcagcatttg gtacagttgt cacttgctcc tcctgacaaa   4020
ctggctttac ttgatttctg ggacaccaca ttctctccat tcctttcttt cctcaatgac   4080
ccttctgttt cctttgggca aaggaaggga aaaaaacttc atcttattct tgacctctta   4140
atattagcac acaccagcct ccactcttgg tccttttatc ttctctattt atacttactc   4200
ccttggtaac ttcttcaagg ctcatgccaa ttatacattt tagctagcat atttctccca   4260
aaatccagat tcaccattct acttagatat cttaagctca acctatccat accgaactcc   4320
ttatcatttt cccaaactta ctatatttat agccatccca tttcagttga taacaaattc   4380
atccttcaag tcactcaggc cagaatcttt agagtcatct tcactctttt ctttttctca   4440
cactcaggat tcatccatca gaaaatcctg ctggctccac tttcaaaata catatgaaat   4500
cagattactt tgattatttt attactacta ttactgaaca gatagcactt ctcacccaag   4560
```

ttgctgcaag agcatctaat aggacttcct gtttctacct cccccacccc catattagca 4620

accaggcagc cagagggtcc tttaagactt aaacctgatt atatcactcc tatactcaaa 4680

accctgcaac tggtccccaa acaccgacag taaaaactga agtctttaca ttgaactaaa 4740

aagtccgaca ttatttgact tctgccacat ctgtgacatc atatcctcat atttccatca 4800

ttgttccttt tctccagcca aggagcttaa ttaattaata agcttaatta attgctcaat 4860

taataaatat ttgttaaatc aatctcagtt tccatggagc tcatagtcta ctgggagaga 4920

aaaatatata aaagaataca aaaagaaggt aattaaagct ttcctcaatc tcccattcct 4980

aaacaatgac aagtgaatgt tgaaggttga gaaatttgcc agggggtggg agtagtatag 5040

gggacattgg gaggaagcaa ggacatttca ggaaggatga acatggcaca tacaaagacc 5100

tagagaaatg aatcagcaga acatttaaag aattacgagt aagcatcaaa gaataatatt 5160

taagattaag gaatctgaat atgggaagta aacataaata taatttacac tttataaaag 5220

agtataatca tgaaagactc tctatttgtt tcttccctta cagctgtcag tctagtctca 5280

gagtaactta ttaaccatat atatatatat tttttgacac acctcaacag tgccaaagca 5340

atacttggaa aggattctaa attccccaaa ttaaatatac aaaagaaaaa cccagagtca 5400

gacttaattt gaaaaggtaa aggagtgggt gttctactat atcaaattta atttgtacaa 5460

aatcatctct ggtaacatta tttttcctgt tccactgtgt ttagactact ttagtaaggc 5520

ttgatctccc tgtctatcta aacactgatt cacttacagc cagcttcagg ctaacattga 5580

tcttactaat acccaacaaa tccacaaagt gttagtttca catgattttg tataaaaggt 5640

gaactgagac tagattcagc cc 5662

<210> 29
<211> 33
<212> DNA
<213> Sus scrofa

<400> 29
acagcttccc ccagacaagg cagccgatca cag 33

<210> 30
<211> 1205
<212> DNA
<213> Sus scrofa

<400> 30
gtgagtctta gcatttatag ttaccaagag gtgacagtta gttctgaaat gatttttcgg 60

gatctgaaga acaaatctag agctttttaa cttctgttgg ggagggaatt cgtacttgtc 120

aacctggctt ctcaaatatg gatagtgcac tgtaattact gtagcaagca attgactttt 180 catagaccag ttcacctagc ctctgatatg gtcttatttt acaaaaagga ggaaaaagca 240

aatgatattt atgagatgct aaaaatgatg aactaattta gtagtacaaa agtttttctt 300

ggagttccca tcgtggcgca atggttaacg aatccgacta ggaaccaaga ggttgcgggt 360

tcgatccctg gccttgctca gtgggttaag gatccagcat tgctgtgagc tgtggtgtag 420

gttacagaca cagcttggat cccacgttgc tgtggccctg gcatagggcg atggctacag 480

ctctgattag acccctagcc ttggaaactc catatgccaa gggagcagtc caagaaatgg 540

caaaaagacc aaaaaaaaaa gtttttcttt ttaaataaaa tgttttaaaa tgataatgaa 600

gggacaaata tgatgatcac aattacttgc ttcagagtaa tcctttaaga cagtcaatgg 660

caatactcta taaatattgc tctgcttaaa acattatatt ggagttttga cccataatat 720

agttctactt tgacaaaaaa aaaaaaaatt gaggaggaga ataagaagaa acgtttggag 780

ttccccgtcg tggcgcagtg gttaaacgaa tccgattagg aaccatgagg ttgcgggttc 840

ggtccctgcc cttgctcagt gggttaatga tccggcgttg catgagctgt ggtgtaggtt 900

gcagacgagg ctcggatccc cgcgttgctg tggtttctgg cgtaggcggg tggctacagt 960

tttgattcga cccctagcct gggaacctcc atatgccgcg gggagcgccc aaagaaatgg 1020

caaaagacag aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa agaaacgttt gttcaagaaa 1080

caagaattaa gaaaaggaaa ggaaggaaaa ccactatgga gtaaaagtga ctggagagga 1140

tgaatagacc agttattcaa ggtttggtca acttacatta cgaatgtaat tctttggttt 1200

ttcag 1205

<210> 31
<211> 197
<212> DNA
<213> Sus scrofa

<400> 31
ttttttacag gccttaattg tttggtttcc accccaagat gaagtcgctg cagttttgct 60

tcctattctg ttgctggaaa gccatctgct gcaatagctg tgagctgacc aacatcacca 120

tcacagtgga gaaagaggag tgtaacttct gcataagcat caacaccacg tggtgtgctg 180

gctattgcta cacccgg 197

<210> 32
<211> 1556
<212> DNA
<213> Sus scrofa

<400> 32

gtaggttctt tgctttgcta gaagtgaggg tgctgaaggt ctgtaaaagg cgggctttac 60

taattcccac tttatcaata ttttaagttt ccggaacagc catgagtccc ttagtcaata 120

ctgtctgttt cctgattggg gttatttacc atgacatcgg ttaaatcttc aggcctggat 180

ttgattaagg taaatttagg gaagcctcag attttatctg attaatttgg taattgccaa 240

ctctattttt taattttatt taattttttt atttcaaaaa aagtagttct attctagatt 300

ctacacatac agagataaac acataaacat acatatattt aataacagaa gatctacaat 360

atttcccaaa agccaatttt tgtaattgaa gctatatctt tgcaatagag atagtatcaa 420

aatgtttgta gcaacataaa aacacagcca tgttataaaa actgtcttac tggcccatct 480

caatacaaat gccaacgcgc agcctgagaa cacaatcaat ccttgcagac tgttaggacc 540

caaatgaact ggcaaaccca ctcccttctt tatatggttg agaaaaacaa ggcacagagg 600

gataaaacca ctagtttgta ttcacacagt ttctttgaat taatccaagt gaaaaagcag 660

tttctacttt atttttccc ctataacacc tggatatcga tgcagaattt ccgtaaattg 720

aaattgaaaa caacttttta atgcaatata ctttactggg tggtaaatga gtttgaccaa 780

actccactta ttgcatctta ttgggataca gacttgatgg catgatatgg aaataaatta 840

aacataagtg tctatttctt ccctcagtgg attttttttt ttaactagaa agtgttagaa 900

taaggttgtt ctgacaggac tgaagttctt atacacaaac atgaaagctt tgaaactgag 960

ctctgaaaaa tatacagcat ttaagagggg aagatgtctg taagacagca gaatatttaa 1020

aatcttacat gaatttttat agtcatgtta agctaagtat taacattcca cattatatat 1080

ttttgatttt ttttatacac acccagggac catgtattga gaaaattttt ctgagaaatt 1140

aaacttcagt tttttatggg ttaagctgtc attaatatag ctttcaactt agtaattaat 1200

atagctttca actttcaaaa cgtcaaaatt tctgtcctat tttcttttta attatttttt 1260

atattgaaag ttaagtttct ttaaagtcag agaaataatt aacattttga catagacata 1320

aggagtagga aaaggaataa tacattttct gtaagatttc cagatcagaa aacatggcat 1380

agcatatagg ttatttatga tttatgaaat catgtttcct tggttaggaa ttctataaat 1440

ggccttaatg gataaatgtc agagcaagaa atattcaatg cctgtctcat tttgattaaa 1500

tagaaacttc tgtaatactt taacctaact ctctctctct cccctgaatc ccttag 1556

<210> 33
<211> 812
<212> DNA
<213> Sus scrofa

<400> 33

gacctggtat acaaggaccc agccaggccc aacatccaga aaacatgtac cttcaaggag 60

ctggtgtacg agaccgtgaa agtacctggc tgtgctcacc atgcagactc cctgtatacg 120

tatccagtag ccactgaatg tcactgtggc aagtgtgaca gtgacagtac tgactgcacc 180

gtgagaggcc tggggcccag ctactgctcc ttcagtgaaa tgaaagaata aagagcagtg 240

gacatttcat gcttcctacc cttgtctgaa ggaccaagac gtccaagaag tttgtgtgta 300

catgtgccca ggctgcaaac cactatgaga gaccccactg atccctgctg tcctgtggag 360

gaggagctcc aggaatgcag agtgctaggg cctcagtccc atcaccactc aaccctgtat 420

tttgggtctg gttccataag ttttattcgg tctttttttt ttaaattact caatgaattt 480

tattacattt ataattgtac aatgatcatc acaacccaat tttataggat ttccatccca 540

aacccccagc atagaccccc atctcccaat ctgtctcatt tggaaaccat aagtttttca 600

aagtccgtga gtcagtatct actcagtctt attaccttaa tgacatgtgg gtgttttctg 660

tttaataatc ttagaaatcc tctcaagaca gggatatgga cccagaggaa ggaaatgggc 720

taagaatggg tgaaaggact aaatgcagca ttctcccact agacacagaa gcctacaaga 780

gcagggccag tctctttgtc atgagtgtgg cc 812

<210> 34
<211> 994
<212> DNA
<213> Sus scrofa

<400> 34
tcaatacctа gcacagtgac tagaattcag taagaaactc aagaatggct tccttaagga 60

aagtaagatt ggaaatgtag ggggtaggaa aatactgaaa gaagatgttg gaggctatgt 120

gatgaggctg cccttggcaa tgccagtcag cccgtggaag ggggtccatc agttccagta 180

ccgcttcacc gctcttcctc cggcatatgg aggatggaga caggacatct ctctcaggca 240

ggtggcggtt accgagctca ggatttccaa ccccttagt taagggcaaa agcaagaaat 300

gttaatgcgg gtttgtggaa attaacccac atctattcca tcatttaaat aaatggaaca 360

aatgctatca gactcctgca aaactccctc caggttggga tccactcctt tggagagagg 420

tggatttgaa agcaggttta aaagcgattt tggcaactta ataagtacat ttatcttatc 480

taaaaatgca tttgtgtaaa gaaatagctc ttttagaatt agccataagg ggaaaaaaac 540

aaacaaaaaa aactgctgtt ttctagaata ctctatcagt cttttgtcta tccatgttct 600

cacaaatcta tttctttcaa gaaggtaaat cttgaagcta tttcatgagt tgatgttgtt 660

ttaagatgtt acctcttagt tatgtacttg tttcatactt atgttgttta atttatttaa 720 atcttatttt tttaataaag acgctagcta ctagagtcat agatttggat ttttttcata 780

taccagcaga tgactaaaat gtctgtatat ttataatatt aatagaaaga gtcttattta 840

aaaaaactcc ttggagttcc cgtcgtggcg cagtggttaa cgaatccgac taggaaccat 900

gaggttgcgg gttcggtccc tgcccttgct cagtgggtta acggtccggc gttgccatga 960

gctgtggtgt aggttgcaga cgcggctcgg atcc 994

<210> 35
<211> 294
<212> DNA
<213> Sus scrofa

<400> 35
ggagttcccc gtcgtggcgc agtggttaaa cgaatccgat taggaaccat gaggttgcgg 60

gttcggtccc tgcccttgct cagtgggtta atgatccggc gttgcatgag ctgtggtgta 120

ggttgcagac gaggctcgga tccccgcgtt gctgtggttt ctggcgtagg cgggtggcta 180

cagttttgat tcgaccccta gcctgggaac ctccatatgc cgcggggagc gcccaaagaa 240

atggcaaaag acagaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaagaaac gttt 294

<210> 36
<211> 22
<212> DNA
<213> Sus scrofa

<400> 36
cctttaagac agtcaatggc aa 22

<210> 37
<211> 22
<212> DNA
<213> Sus scrofa

<400> 37
agtggttttt ccttcctttt cc 22